U.S. Army
Corps of Engineers

INFORMATION TECHNOLOGY

CAMPAIGN PLAN

US Army Corps
of Engineers®

2002 - 2007

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HEADQUARTERS, U.S. ARMY CORPS OF ENGINEERS
Corporate Information
Washington, DC 20314-1000

USACE INFORMATION TECHNOLOGY CAMPAIGN PLAN
FY 2002 - FY 2007

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STATEMENT OF OBJECTIVES

The U.S. Army Corps of Engineers (USACE) is respected worldwide for its engineering and environmental problem solving. The USACE vision is to be the world's premier public engineering organization responding to our nation's needs in peace and war. There is no doubt that information technology provides USACE with tremendous potential to fulfill its diverse role and to provide our clients and stakeholders with a broad range of products and services.

Since the late 1980s, USACE has been recognized as a government leader in the innovative use of industry and public information technology standards. Computers have changed the way we do most things and nowhere is this truer than in the engineering profession. Much of the tedious work of design calculations, stress calculations, and other computations has been reduced to computer programs that execute these tasks in seconds. Even the drafting board has all but disappeared from the scene as computer aided design and drafting replace pencil and paper.

It is our intention to remain an information technology innovation leader keeping pace with the most promising industry trends. We do this to keep our information technology in sync with our important mission and business objectives. Ultimately, we must use the effective application of information technology to provide superior value to our clients and stakeholders. Our aim is to ensure that our information technology programs continually enhance our mission effectiveness. For this reason, we are moving forward with a strategic campaign plan that focuses on four strategic initiatives. These initiatives are engineered to leverage past, current and future information technology investments and knowledge capital towards achieving higher standards of program delivery and information technology governance.

Ultimately we must use the effective application of information technology to provide superior value to our clients and stakeholders.

Initiative 1

The first initiative involves the establishment of an effective standardized and interoperable IT infrastructure. Building on the Federal Enterprise Architecture vision, the USACE Enterprise Architecture Framework serves as a reference point to facilitate the efficient and effective coordination of common business processes, information flows, systems, and investments. In time, the USACE Architecture will provide business processes and systems that operate seamlessly in an enterprise environment. Our focus in defining such an environment is threefold: 1) to provide the

In time, the USACE Enterprise Architecture Framework will provide business processes and systems that operate seamlessly in an enterprise environment.

maximum exploitation potential of our information resources; 2) to support and facilitate sound decision making; and 3) to provide greater potential for IT cost reduction.

This initiative also focuses on the continued implementation and use of a robust and integrated systems life cycle and software engineering practices. While this agency is focused on finding quality vendor COTS software solutions, our unique set of missions, functions and information requirements will continue to demand some customization and build-from-scratch solutions. At least in the near term, we must continue provide superior-quality life cycle management solutions using sound engineering practices if we are to maintain our mission objectives.

Initiative 2

The second initiative focuses on building a secure and sharable IT infrastructure. Our goal is to ensure implementation of security practices within USACE that gain public confidence and protect government services, privacy, and sensitive and national security information.

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We must ensure the confidentiality, integrity, and availability of all information under the USACE stewardship. We will provide a measure of confidence that the security features, practices, procedures and architecture of our information accurately mediate and enforces security policy.

Initiative 3

The third initiative directs the focus of staff and management on the optimized and effective management of information technology and knowledge capital. This initiative has four goals. The first goal is to ensure the adoption and implementation of a structured and disciplined approach in the selection, control, and evaluation of IT investments. Investments in IT should be focused on a continuous increase in alignment with business plans, demonstrating a positive relationship between IT and accepted measures of business performance. The second goal of this initiative is the facilitation of the sharing of knowledge across our traditional stovepipes. This knowledge often exists in small groups of people or stovepipe systems around the agency. We need to better leverage that knowledge in order to help USACE do its mission better. The third goal of this initiative is to ensure that USACE employees have

The third initiative directs the focus of staff and management on the optimized and effective management of information technology and knowledge capital.

the necessary levels of "personal knowledge capital." The successful development and deployment of IT strategies, in an era of rapid technological obsolescence and tight budgets, requires a cadre of highly skilled information resources management practitioners at all organizational levels. The Clinger-Cohen Act cites the need for action to provide the development of a well-trained corps of professional Federal government information resources managers. The Act explicitly levies responsibilities on CIOs regarding work force management. The fourth goal of this initiative provides for the continued development of the liaison interface between the CIO's office and the functional community.

Initiative 4

The fourth initiative focuses on becoming a citizen-centered E-Government agency. Electronic government is one of the five key elements of the President's Management and Performance Plan. The President's Budget outlined how we will focus our E-Government initiatives on reforming the Government so that it is citizen-centered. Our key objective in this initiative is to seek opportunities to promote an electronic government to deliver services and meet customer's needs using electronic resources and modern technology.

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Expectations/Results

The implementation of these four initiatives positions USACE to exploit fully our potential as the world's premier engineering organization. The five year period covered by this campaign plan is one in which we will have an unprecedented opportunity to electronically reach and serve our clients and stakeholders by utilizing:

The implementation of these four initiatives positions USACE to exploit fully our potential as the world's premier engineering organization

- a capable and interoperable IT architecture that is aligned with business objectives;
- maximum interoperability of systems, efficiencies, and cost;
- a modernized and well managed network and communications infrastructure;
- a secure and protected infrastructure for information, systems, and information technologies;
- well selected IT products based on cost, benefits, risks, and returns;
- improved access and collaboration of our corporate and personal knowledge capital;

- a “digital agency” where many of our processes, activities, and interactions are done in an electronic manner.

SUMMARY OF THE IT CAMPAIGN PLAN

Mission

"Provide the vision and leadership for developing and implementing the USACE Information Resource Management (IRM) Program, including leveraging information technology (IT) to optimize the Corps mission effectiveness and stewardship of corporate information resources."

Vision

"Fully leverage Information Technology products and services throughout the Corps."

Guiding Principles

- Provide Effective Leadership
- Provide Customer Service
- Conduct Visionary Strategic Planning
- Conduct Effective Operational Planning
- Excel at Meeting Performance Objectives
- Provide IT Governance
- Provide a Fully-Leveraged IT Architecture
- Meet Security Requirements
- Enhance Skills and Capabilities
- Provide Shared Services

Underlying Philosophy

These philosophies have been at the heart of USACE IT programs. Many of these were taken directly out of strategic documents or senior leader presentations. They represent the underpinnings of this campaign plan and have all been incorporated into the goals and campaign strategies. They are listed here for reference.

- Improve alignment with the USACE and Department of Army missions, strategies, and processes
- Plan for the future
- Satisfy the stakeholders
- Protect information
- Optimize the use of technology
- Leverage the vast knowledge resources of USACE and its staff
- Serve our agency, our government, and our citizens
- Build "on top of" what has been done so far

- Pragmatic
- Flexible
- Select and/or develop systems based on their overall value and associated risk
- Evolve and integrate automated systems to align with our business processes and enhance collaboration
- Provide customers with systems that are fully functional, reliable, responsive, and accessible
- Build systems "from the outside-in" (with the customer in mind)
- Provide the means to ensure the confidentiality, integrity, and availability of information processed by the Corp's information-based systems
- Implement Broadband technologies and associated management tools
- Build a career development roadmap for the USACE IT community
- Increase interoperability and the use of standards
- Transform data into competitive advantage
- Sustain competitive advantage by building on what exists
- Empower the information user

Major Initiatives Categories

Initiative 1 - Information Technology Architecture

Initiative 2 - Information Assurance

Initiative 3 - Information Resources Management

Initiative 4 - E-Government Programs/Services

Initiatives and Associated Goals

Information Technology Architecture

Goal 1:	**Achieve highly effective IT infrastructure support that is in full alignment with mission objectives and capabilities; and to achieve the maximum interoperability of systems, efficiencies, and cost.**
Goal 2:	**Reduce system development cost and the complexity of systems implementation while providing customer-focused systems that are responsive and reliable.**
Goal 3:	**Increase information delivery capabilities and enterprise management of the IT infrastructure while reducing overall cost to operate.**

Information Assurance

Goal 4: **Ensure the security, integrity, and availability of USACE information, systems, and infrastructure.**

Information Resource Management

Goal 5: **Provide a structured and disciplined approach in the selection, control, and evaluation of IT investments. Investments of IT should be focused on a continuous increase in alignment with business plans, affording a positive relationship between IT and accepted measures of business performance.**

Goal 6: **Facilitate the sharing of knowledge across traditional stovepipes, both within USACE and with external parties. Exploit massive collections of detailed and historically rich data and turn them into timely, useful and shared business knowledge.**

Goal 7: **Enable USACE employees to possess "personal knowledge capital" for successful development and deployment of IT. This requires a cadre of highly skilled information resources management practitioners at all organizational levels.**

Goal 8: **Promote successful development, deployment, and operation of information technology through close coordination, liaison, and partnership between the business area program sponsor and the Chief Information Officer.**

E-Government Programs/Systems

Goal 9: **Identify and implement opportunities that use electronic means to provide information, services for USACE functionals and its clients.**

Enterprise-wide IT Developmental Levels or Phases

- **Level 1 – Today:** Current need to implement a Corps-wide IT Common Operating Environment; obtain alignment of IT requirements with overall Corps mission; increase Bandwidth and eliminate obsolete communications equipment; Establish basic capabilities processes for Information Assurance

- **Level 2 – Near Term:** Establish basic level of IT Common Operating Environment; modernize communications infrastructure; better obtain agreement on alignment of IT functions with Corps business processes; implementation completed of basic Information Assurance Program

- **Level 3 – Future:** Field Achievement of IT Campaign Objectives and Goals

Supporting Developmental Activities

- Create and maintain an overarching Enterprise IT Architecture infrastructure
- Utilize sound information management practices and techniques
- Implement sound information assurance practices
- Incorporate knowledge management into the USACE culture and IT systems
- Grow and utilize the "personal knowledge capital" of USACE professionals
- Establish and manage a standards-based enterprise-wide IT common operating environment, leveraging the best practices
- Enhance the investment analysis process for identifying, prioritizing, and selecting IT projects comprising the annual budget
- Implement E-Government Programs

RELATIONSHIP OF CAMPAIGN INITIATIVES, GOALS AND STRATEGIES

Initiative 1 – Information Technology Architecture

Campaign Goal 1: **Achieve highly effective IT infrastructure support that is in full alignment with mission objectives and capabilities; and to achieve the maximum interoperability of systems, efficiencies, and cost.**

Campaign Strategy 1.1	Establish an IT Architecture Program and support the initial development of a USACE Enterprise Architecture Framework
Campaign Strategy 1.2	Include architectural compliance as a key decision criterion in IT selection, control, and evaluation processes.
Campaign Strategy 1.3	Adopt an Architectural Alignment and Assessment Process to evaluate our current state of alignment with our near-term and future IT architecture and our current, near, and future business processes. Develop a plan for achieving alignment.
Campaign Strategy 1.4	Implement an Enterprise Architecture Repository to assist IT professionals, managers, and functional liaisons with practical insights to IT processes, enterprise standards, architecture models, methodologies and strategies.
Campaign Strategy 1.5	Conduct alignment synchronization with the Federal Enterprise Architecture Framework to ensure shared development for common Federal processes, interoperability, and sharing information among the Agencies of the Federal Government and other Governmental entities.

Campaign Goal 2: **Reduce system development cost and the complexity of systems**

	implementation while providing customer-focused systems that are responsive and reliable.
Campaign Strategy 2.1	Develop the USACE Common Operating Environment (COE).
Campaign Strategy 2.2	Implement sound technology development and deployment infrastructure and the institutionalization of best software engineering and project management practices.
Campaign Goal 3:	**Increase information delivery capabilities and enterprise management of the IT infrastructure while reducing overall cost to operate.**
Campaign Strategy 3.1	Implement modernized broadband technologies.
Campaign Strategy 3.2	Implement an Enterprise Management System approach to our network and communications infrastructure.
Campaign Strategy 3.3	Migrate to Windows 2000.

Initiative 2 - Information Assurance

Campaign Goal 4:	**Ensure the security, integrity, and availability of USACE information, systems, and infrastructure.**
Campaign Strategy 4.1	Establish an Information Assurance Program that will provide the review, development, coordination and enforcement of IA policy, doctrine, directives, and regulations. Manage the acquisition, implementation, and integration of Information Assurance (IA) products and services into USACE programs and IT systems and activities.
Campaign Strategy 4.2	Provide Information Assurance technical support and products to USACE organizations.
Campaign Strategy 4.3	Provide Information Assurance education, training and awareness to USACE organizations.

Initiative 3 - Information Resources Management

Campaign Goal 5:	**Provide a structured and disciplined approach in the selection, control, and evaluation of IT investments. Investments of IT should be focused on a continuous increase in alignment with business plans, affording a positive relationship between IT and accepted measures of business performance.**
Campaign Strategy 5.1	Provide a corporate-wide integrated processes for IT Investment Control and Evaluation
Campaign Strategy 5.2	Implement a standard process for IT project scoring and ranking criteria to determine which IT projects are best suited to meet USACE needs
Campaign Strategy 5.3	Implement an automated system to assist in the selection, control and evaluation of IT investments.
Campaign Goal 6:	**Facilitate the sharing of knowledge across traditional stovepipes, both within USACE and with external parties. Exploit massive collections of detailed and historically rich data and turn them into timely, useful and shared business knowledge.**
Campaign Strategy 6.1	Foster a culture that supports knowledge sharing through the development and implementation of a formal strategic knowledge-sharing program.
Campaign Goal 7:	**Enable USACE employees to possess "personal knowledge capital" for successful development and deployment of IT. This requires a cadre of highly skilled information resources management practitioners at all organizational levels.**
Campaign Strategy 7.1	Conduct an annual assessment to determine the established levels of appropriate knowledge and skill requirements to facilitate achievement of the IRM performance goals.
Campaign Strategy 7.2	Establish a program to ensure that USACE employees have access to IT training and IT resources as needed to perform their job functions and build their careers.

Campaign Goal 8:	**Promote successful development, deployment, and operation of information technology through close coordination, liaison, and partnership between the business area program sponsor and the Chief Information Officer.**	
	Campaign Strategy 8.1	Implement the Functional Liaison Program.

Initiative 4 - USACE E-Government Programs/Systems

Campaign Goal 9:	**Identify and implement opportunities that use electronic means to provide information, services for USACE functionals and its clients.**	
	Campaign Strategy 9.1	Create a task force with the responsibility to identify all means practical for implementing the President's E-Government Initiative.
	Campaign Strategy 9.2	Conduct a survey to determine all USACE transactions with the public that are not being done electronically; conduct a survey of all other transactions not yet electronic, including information dissemination and transactions between agencies. Compile these lists in a standard database format for internal retrieval, reporting purposes, and performance accomplishment.

CHAPTER 1. INTRODUCTION

1.1 General Purpose

The broad, overarching goal of the USACE Information Technology Campaign Plan is to set clear information technology (IT) direction for the next five years in order to:

- Improve alignment with the USACE mission, strategies, and processes;
- Optimize the use of technology; and
- Leverage the vast knowledge resources of USACE and its staff.

The USACE Information Technology Campaign Plan offers the strategic platform for implementing the USACE Information Resource Management (IRM) Program. The ultimate objective of this Campaign Plan is for the implementation of key information technologies (IT) that enhance USACE mission effectiveness and provide stewardship of corporate information resources. This calls for the alignment of information technologies (IT) and information systems with corporate goals. In short, this Campaign Plan prescribes a course of action that will result in a positive relationship between information technologies and the Corps' accepted measures of business performance.

This plan represents a response to the opportunity to seize competitive advantage by exploiting the power of information, and addresses the problems and obstacles in doing so. This response takes the form of a general enterprise information technology architecture integrated with strategic vision made up of closely related objectives, components, and levels, along with a framework for enabling that vision in the Corps. The objectives and strategies described herein prescribe a state of IT proficiency that is general enough in nature to avoid becoming obsolete due to technological and methodological developments, yet specific enough to allow the Corps to make significant progress without having to completely reinvent the wheel. This vision is called the USACE IT Campaign Plan, and its major elements are detailed throughout this document.

1.2 Overview of Specific Goals and Expected Results

This Campaign Plan presents the initiatives, strategies and tactics for achieving goals in these specific areas:

Initiative 1): The establishment of an effective standardized and interoperable IT infrastructure results in:

- *a capable and interoperable IT architecture that is aligned with business objectives*;
- *the maximum interoperability of systems, efficiencies, and cost;*

- *a modernized and well managed network and communications infrastructure.*

Initiative 2): The building of a secure and shared IT infrastructure results in:

- *a secure and protected infrastructure for information, systems, and information technologies.*

Initiative 3): The directed focus of staff and management on the optimized and effective management of information technology and knowledge capital results in:

- *well selected IT products based on cost, benefits, risks, and returns;*
- *improved access and collaboration of our corporate and personal knowledge capital.*

Initiative 4): The focused effort to move towards becoming a citizen-centered E-Government agency results in:

- *a "digital agency" where many of our transactions, processes, activities, and interactions are done in an electronic manner*

1.3 Background

The Congressional Legislatives, Information Technology Management Reform Act (ITMRA) of 1996 (Clinger-Cohen Act), the Government Performance and Results Act of 1993, and the Paperwork Reduction Act of 1995, implementation policy for handling information management in Government, maintains that "a Government that works better and cost less requires efficient and effective information systems." A key point that aids in attaining this goal is to require a significant improvement in the manner in which we acquire, use and manage information and information technology.

One of the greatest challenges facing the Corps is to provide greater mission effectiveness and optimized products and services in an environment where an increase in resources seems improbable. Also challenging the Corps is the necessity of a positive embracing and assumption of changes caused by emerging trends and forces, both internal and external. Consequentially, the world business communities exert pressure on the IT industries to provide a simple solution to all their AIS requirements, based on the following:

- a user interface that always works the same way for all applications;
- a user interface that can present both images and text;
- systems that run on standard, interchangeable hardware;
- systems that can operate inexpensively at any destination in the world; in effect, they have demanded a 'Common Operating Environment'; and

- systems that can provide accurate, up-to-date information to business processes at the time required and in the proper format.

In effect, this list describes what the IT industry calls a "common operating environment." The *initial* architectural components for a common operating environment have been delivered via browser based applications which run on an open systems platform supported by the Internet. However, the reality of fully providing such a simplified environment to the user community requires that USACE be deliberate and definitive in its response. To successfully move in this direction, a change is required in the USACE organizational culture and the manner in which we conduct business. USACE is forced to abandon old business practices in favor of more effective business practices that exploit the power of our information and address the problems and obstacles involved in doing so. A primary attribute of the new business practices is that they must encourage collaboration between all stakeholders. They must also focus on continuously applying the best information technology to improve systems that achieve reliable and more accurate customer solutions.

In order, to attain strategic and operational excellence several information and information technology (IT) initiatives will be undertaken. These initiatives are deemed to be the key to improving IT services. A Corporate Information Campaign Plan was developed to enhance the organization's ability to acquire, manage, and distribute information and information technology. To meet this challenge cooperation and collaboration among all Headquarters (HQUSACE) elements and the Regional Chief Information Officers (RCIOs) is required.

1.4 Business Case for Campaign Plan

The U.S. Army Corps of Engineers (USACE) is respected worldwide for its engineering and environmental problem solving. The USACE vision is to be the world's premier public engineering organization responding to our nation's needs in peace and war. To meet these challenges, and to be successful, IT resources and systems must be clearly aligned with the business plans of the organization. To accomplish this, we must have a clearly defined IT mission, an IT vision of our future and an IT strategic campaign plan. This will allow USACE to view where it is today, and where it wants to be in the future. Once this is accomplished, USACE should map a course that will direct how it will get from the present to the future.

The USACE Corporate Information Campaign plan provides the overall direction and guidance for managing the USACE information technology resources. It promotes the "innovative use of information and information technology" to revolutionize and align with the USACE business environment. Specifically, USACE will focus on a strategic direction that proactively manages change and enhances the manner in which the USACE mission is accomplished, through the strategic application of information technology.

USACE business processes need to maximize strategic and operational efficiencies; thus, IT tools and services must be selected that are consistent with these strategic goals. Essentially, the USACE information and information technology must operate, in an effective and efficient manner, in order for the organization to accomplish its mission. This plan sets forth the strategy that will move USACE in this direction. It incorporates Information Technology goals and

objectives for fiscal years (FY) 2002 through 2007 for USACE. This includes all Headquarters (HQUSACE) elements, major subordinate commands, districts, laboratories, and field operating activities (FOA).

While USACE tries to achieve its goals and objectives, it must remain in compliance with current legislation. This Campaign Plan is a living document that must be periodically reviewed and updated in accordance with new laws and legislation. Also, a feedback mechanism that measures performance outcomes is incorporated into this strategic plan, so that adjustment for changes can be made. The pursuit of excellence is a central tenet of USACE operational philosophy. Ultimately, USACE will take the necessary steps to ensure the deliverance of superior quality products and services through the creative use of information technology.

1.5 Background of IT Mission

The USACE Corporate Information mission is to provide the organization with the ability to readily acquire information and information resources, by implementing business practices that enhance mission performance and customer satisfaction through the effective, economic acquisition and use of information technology. The Mission of Corporate Information is to:

> ***"Provide the vision and leadership for developing and implementing the USACE Information Resource Management (IRM) Program, including leveraging information technology (IT) to optimize the Corps mission effectiveness and stewardship of corporate information resources."***

1.6 Background of IT Vision

The USACE IT community is challenged with establishing the methods that the business processes uses to strive for and attain operational excellence. This requires converting information into knowledge, and then converting knowledge into services, by using information technology. This allows users to make well informed and logical business decisions. The USACE must be able to deliver our projects, products, and services using IT or we will become a second choice as an Engineering/Architectural corporation. As a result, in order to effectively meet this challenge, the Corporation Information vision is to:

> ***"Fully leverage Information Technology products and services throughout the Corps."***

1.7 Guiding Documents

The structure of the Campaign Plan was developed from the following documents: (1) the Commander's Campaign Plan; (2) the Strategic Communications Campaign Plan; (3) the Corporate Information Campaign Plan Briefing; (4) the USACE Architecture 2000+ and the Common Operating Environment.

2 CHAPTER 2. USACE Corporate Information Campaign Plan: Initiatives and Implementation Plan for the 21st Century

2.1 Overview of Initiatives Strategy

This section details the specific implementation strategies for achieving our corporate IT objectives. This implementation is driven by a four part initiative strategy; (1) Information Architecture Infrastructure; (2) Information Technology Assurance ; (3) Information Resources Management; and (4) the E-Government Programs/Systems. Each strategic initiative is described in terms of its strategy, status, performance measures, and anticipated business benefits and outcomes. Resource requirements that support the implementation of this plan will be identified as specific project plans are developed.

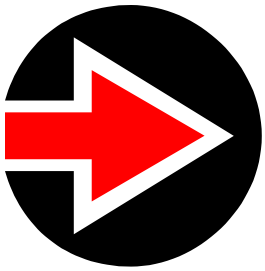
Following the detailed descriptions of each initiative and goals, we have provided a matrix that links these goals to the Chief's goals for the total USACE organization. This can be found in Appendix B.

2.2 Implementation Key Factors

Establishing a strategy that adequately supports the USACE business, technology, and investment management requires planning and USACE-wide commitment. The numerous technologies, people, and time required to sustain a leading edge in information technology and to support the stated strategies are expensive. Many of these strategies are, or will be, supported by projects that constitute the tactical reason for the delivery of the strategic campaign plan.

Key factors, external to the agency and beyond its control that could significantly affect the achievement of the campaign strategic goals include:

- Congressional and DoD laws, legislations, and directives
- Proper coordination and cooperation among USACE, the Army and DoD community



Initiative 1

2.3 Initiative 1 – Information Technology Architecture

As mandated by the Clinger/Cohen Act of 1996, Federal Agencies must develop and maintain an information technology architecture or enterprise architecture. The Federal Enterprise Architecture Framework (FEAF), Version 1.1, September 1999, consists of various approaches, models, and definitions for communicating the overall organization and relationships of architectural components required for developing and maintaining a Federal enterprise architecture. Section 5125 of the Clinger/Cohen Act defines an information technology architecture as an integrated framework for evolving or maintaining information technology and acquiring new information technology to achieve the Agency's strategic and information resources management goals.

Initiative 1, the establishment of a USACE Information Architecture provides the IT Architecture framework for USACE. Its purpose is to establish an effective standardized and interoperable IT infrastructure. Our expected return is an increase in mission effectiveness through the alignment of our IT resources and infrastructure with our business processes. This will provide business processes and systems that operate seamlessly in an enterprise environment. The IT Architecture is the key to ensuring that the USACE IT portfolio develops in a structured manner that aligns with and fulfills the needs of all business areas. It will help USACE meet the challenge of evolving USACE IT/IM capabilities and to meet the business needs of tomorrow in the most cost-effective manner. It is critical that all USACE information systems meet the mission needs, in terms of availability, accuracy, timeliness, and quality. This requires that all critical business processes strive for an open architecture that promotes interoperability and thereby maximizes organizational efficiency. The Corps Enterprise IT Architecture and its two key components, the Technical Reference Guide (TRG) and the Common Operating Environment (COE) allow users to view data and information technology as a corporate resource. Full interoperability and integration must be performed across the business areas and functions.

To ensure that our systems are fully interoperable at both the functional and data levels, this initiative also focuses on the continued implementation of a robust and integrated systems life-cycle (LCMIS) and software engineering practices. While our focus will continue to be on finding quality commercial off-the-shelf (COTS) solutions, we must realize that our unique set of missions, functions and information requirements will continue to demand some customization and build-from-scratch solutions. This requires a disciplined approach to systems engineering. Corporate IT Architecture, a Common Operating Environment, a Technical

Reference Guide (TRG) and a comprehensive Corporate Systems Engineering Management Plan (CSEMP), will provide the USACE with the ability to build, implement and maintain an effective Enterprise Systems Engineering Environment (ESEE). This will ensure the development of a modern, integrated IT Portfolio and infrastructure that meet USACE and DoD requirements.

2.3.1 Information Technology Architecture Goals and Objectives

Campaign Goal 1: **Achieve highly effective IT infrastructure support that is in full alignment with mission objectives and capabilities; and to achieve the maximum interoperability of systems, efficiencies, and cost.**

Goal 1 Benefits: The Enterprise Architecture provides a Corps-wide strategic and tactical planning tool in the form of a structured framework for systems development that will lead to more productive, integrated AIS and infrastructure development. The ultimate benefits of implementing the Information Architecture are seen in the improved ability for information systems to fully support the USACE mission and goals.

Campaign Strategy 1.1	Establish an IT Architecture Program and support the initial development of a USACE Enterprise Architecture Framework
Status/Notes	USACE has taken the steps of defining our enterprise architecture framework, known initially as Architecture 2000+. Efforts now focus on the initial phases of implementation, which involve creating the specific content behind our framework. A key objective is to make this information easily accessible and to provide a means for Content Management
Campaign Strategy 1.2	Include architectural compliance as a key decision criterion in IT selection, control, and evaluation processes.
Status/Notes	Enterprise architecture supports IT capital investment planning by defining a target direction for future IT acquisitions (e.g., application systems and infrastructure). We will begin an effort to ensure that the capital planning and investment control process and enterprise architecture functions are effectively aligned.
Campaign Strategy 1.3	Adopt an Architectural Alignment and Assessment Process to evaluate our current state of alignment with our near-term and future IT architecture and our current, near, and future business processes. Develop a plan for achieving alignment.

Status/Notes	This process is vital to understanding our current state in relation to achieving our IT architectural goal and their alignment with our current, near, and future business performance measures. For IT architectural assessment, we will investigate government and industry assessment guidelines and conduct this assessment within the next FY.
Campaign Strategy 1.4	Implement an Enterprise Architecture Repository to assist IT professionals, managers, and functional liaisons with practical insights to IT processes, enterprise standards, architecture models, methodologies and strategies.
Status/Notes	The Corps Enterprise Architecture (CEA) Web is a tool currently being implemented to provide this architecture functionality. We will continue to populate this tool with IT related content and implement a formal content management system.
Campaign Strategy 1.5	Conduct alignment synchronization with the Federal Enterprise Architecture Framework to ensure shared development for common Federal processes, interoperability, and sharing information among the Agencies of the Federal Government and other Governmental entities.
Status/Notes	The CIO Council has developed the Architecture Alignment and Assessment Guide to assist in alignment analysis.
Performance Measure 1.1:	Percentage of business area projects using the enterprise architecture compared with business area projects that do not use the enterprise architecture.
Performance Measure 1.2:	We are successful when the IT Capital Planning and Enterprise Architecture processes are integrated such that investment decisions can be rated based on their sufficient alignment with the architecture and with business performance measures.

Responsibilities for Campaign Goal 1:

Enterprise Level:	Define and distribute IT Enterprise Architecture standards, guidance, oversight, and management of the architecture.
Regional Level:	Regional guidance, oversight, and management of the architecture.

District Level: District implementation and management of the architecture.

2.3.2 Goals Specific to Common Operating Environment

The USACE Common Operating Environment (COE) is a set of technologies and standards that are designed to eliminate design incompatibilities among USACE systems. The COE is designed to reduce program cost and risk through reusing proven solutions and sharing common functionality, rather than developing systems from "scratch" every time. The purpose of the COE is to field systems with increasing interoperability, reusability, portability, and operational capability, while reducing development time, technical obsolescence, training requirements, and life-cycle cost.

Conceptually, compliance to the COE standards ensures that software that is developed or modified for use within the COE meets the intended requirements and goals and will evolve with the COE system. Compliance also measures the degree to which "plug and play" is possible. Owners of legacy systems should be familiar with COE compliance requirements to ensure that scoping and planning for future legacy enhancement includes COE requirements and goals.

The USACE-wide platform for measuring COE compliance is the Enterprise Systems Engineering Environment (ESEE). ESEE is a single standardized, interoperable platform that enables, enforces, and guarantees proper operation of new and legacy systems and will be housed in one or both of the Corps Processing Centers. The ESEE provides a complete assessment of load stresses on various components of the enterprise-wide operating environment along with an assessment of the synergistic impacts of changes upon related/integrated systems.

Campaign Goal 2: **Reduce system development cost and the complexity of systems implementation while providing customer-focused systems that are responsive and reliable.**

Goal 2 Benefits: USACE will realize a reduction in program costs and risks through the reuse of proven solutions and the sharing of common functionality, rather than developing systems from “scratch” every time. Systems built or modified that are in compliance with COE standards have increased interoperability, reusability, and portability, with a reduction in development time, technical obsolescence, training requirements, and life-cycle cost. Improvement would result from utilizing a common infrastructure, common technology, widely accepted tools and methods, and the re-use of software objects and documentation. Ultimately, this will result in an increase in user productivity and greater confidence in systems.

Campaign Strategy 2.1	Develop the USACE Common Operating Environment (COE).
Status/Notes	We have begun defining a COE through the development of the Enterprise Architecture. We will need to complete the initial COE by building on what has been done and by further integration of our COE with the Army and DoD versions. Information about our COE should be made readily available to IT developers and IT capital planners so that compliance can be determined.
Campaign Strategy 2.2	Implement sound technology development and deployment infrastructure and the institutionalization of best software engineering and project management practices
Status/Notes	This strategy focuses on the continued implementation and use of a robust and integrated systems life-cycle and software engineering practices and the use of an integrated test environment (ITE). The ITE is an essential part of the Enterprise Systems Engineering Environment. While this agency is focused on finding quality vendor COTS software solutions, our unique set of missions, functions and information requirements will continue to demand some customization and build-from-scratch solutions. At least in the near term, we must continue provide superior-quality life cycle management solutions using sound engineering practices if we are to maintain our mission objectives. The ESEE will provide the correct environment to adequately test these solutions out prior to introducing them to the end-users.
Performance Measure 2.1:	Percentage of new systems that are certified USACE COE compliant.
Performance Measure 2.2:	Percentage of legacy systems that are brought up to USACE COE compliance
Performance Measure 2.3:	Percentage of "similar" processes and data that are interoperable.
Performance Measure 2.4:	Percentage of increase in data sharing over previous year and program
Performance Measure 2.5:	Percentage reduction in operating costs for COE compliant systems

Performance Measure 2.6:	Percentage reduction in training costs for COE compliant systems
Performance Measure 2.7:	Percentage reduction in testing costs for COE compliant systems
Performance Measure 2.8:	Percentage increase in user perception of data accuracy and timeliness (measure of confidence)
Performance Measure 2.9:	Amount of reusable technologies used by development projects
Performance Measure 2.10:	Degree of products or services that exceed customer expectation
Performance Measure 2.11:	Degree of products or services that meet customer expectation.
Performance Measure 2.12:	Percentage of customers using COE specifications

Responsibilities for Campaign Goal 2:

Enterprise Level:	Oversight, and management of policies, procedures, standards, methodologies, specifications, software tools, and platforms. Centralized oversight, implementation and management of shared and organization-wide USACE systems.
Regional Level:	Regional oversight, implementation and management.
District Level**:**	Implementation, management, and compliance of systems with COE technologies and standards.

2.3.3 Goals Specific to Network and Communications Infrastructure

According to findings based on a recent independent network assessment, the USACE network infrastructure is faced with the following challenges:

- Lack of Bandwidth
- Lack of Standard Network tools and processes
- Overabundance of Web servers
- Obsolete routers
- Non-optimal routing schemas

- Lack of redundancy at INTERNET gateways
- Lack of standard network Configuration Management policy
- Decentralized management and control of e-mail servers

In the past, USACE network components were designed to address specific and localized needs, without strict regard to recovery processes and security, and overall network management. This has also resulted in costly distribution of network administration and help desk personnel. The quantity and configuration of servers was not optimized to meet our business mission objectives. With, the emergence of the Internet and advances in network and computing technologies several efforts are underway within USACE to provide improved communications throughput and achieve significant cost reductions in the operations and maintenance of our infrastructure. This will be achieved primarily through the implementation of an enterprise management system and the reduction in overall servers. USACE is increasingly using the Internet to access external sources and exchange electronic mail. Each division and district will be linked to a processing center and subsequently to NIPRNET and Internet gateway. A cost-effective solution will be implemented to assure mission essential traffic is supported. Where economically feasible the same division/district will be linked to the alternate-processing center through alternate pathways. This greatly enhances accessibility and response time in utilizing USACE systems and avoids inherent problems in providing services to remote locations.

Campaign Goal 3: **Increase information delivery capabilities and enterprise management of the IT infrastructure while reducing overall cost to operate.**

Goal 3 Benefits: This goal will realize a reduction in overall operations and maintenance costs of our corporate network and information delivery infrastructure while increasing our ability to share greater volumes of diverse information types. This will improve workplace efficiencies and raise the level of user satisfaction. Functional communities will have better access to and more confidence in the accuracy and completeness of USACE data. Technically, USACE will realize:

- an increase in bandwidth;
- optimal routing schemas;
- upgraded and modernized routers;
- standardized network tools;
- a reduction in Web servers;
- a standard network configuration management policy
- centralized management of reduction in program costs and risks

Campaign Strategy 3.1 Implement modernized broadband technologies.

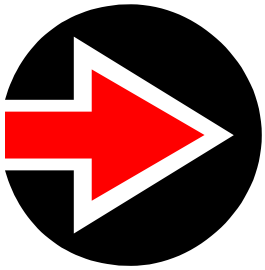
Status/Notes Bulk of the assessment recommendation still pending implementation (would take approximately 24-32 months)

Campaign Strategy 3.2	Implement an Enterprise Management System approach to our network and communications infrastructure.
Status/Notes	This is a key strategy in the realization of a modernized infrastructure that has the ability to effectively align with the needs of our missions. This strategy has a number of objectives: • Manage systems worldwide from eight sites • Reduce Help desks to eight • One phone number for the Help Desk for each region • Reduced support team still required for each district • Consolidate servers at the Division or Regional level • Use Regional sites or Processing Centers as COOP <u>This strategy will provide these advantages:</u> • Reduces personnel requirements • Staffing schedules adjusted to regional requirements • Leverages processing power across a greater area • COOP established between sites • Easier to capture problem trends • Significant reduction in O&M costs • Eliminates single point of failure • Provides multiple COOP options
Campaign Strategy 3.3	Migrate to Windows 2000.
Status/Notes	We are currently conducting tests to determine the corporate impact of implementing Microsoft Windows 2000. Our goal is to migrate to Windows 2000 on the desktop by the end of FY 02. We will migrate to Windows 2000 on the server side by the end of FY 03.
Performance Measure 3.1:	Percentage of expected network availability hours consumed by network outage or other unscheduled interruptions.
Performance Measure 3.2:	Number of ongoing projects that have stand-alone telecommunication systems.
Performance Measure 3.3:	Percentage of data accuracy in tracking telecommunication issues.
Performance Measure 3.4:	Number of projects that have reported future bandwidth requirements.

Performance Measure 3.5:	Amount of reduction of operations and maintenance costs of the IT network and communications infrastructure.
Performance Measure 3.6:	Percentage of decrease in information access time.

Responsibilities for Campaign Goal 3:

Enterprise Level:	Modernization of the USACE CEEIS Network; initial development of the policies, plans, and strategy for enterprise management system; spearhead the initial pilot tests for an enterprise management system
Regional Level:	Regional server optimization; capture future bandwidth requirements.
District Level**:**	Migrate to gigabyte Ethernet; upgrade to dynamic routing environment.



Initiative 2

2.4 Initiative 2- Information Assurance

This initiative focuses on building a secure and sharable information technology infrastructure, as required by DoD. An Information Assurance (IA) infrastructure ensures the confidentiality, integrity, and availability of information processed by the USACE information-based systems. It provides a measure of confidence that the security features, practices, procedures, and architecture of an information system accurately mediates and enforces the security policy. We have established and implemented a USACE-wide IT Security Program in accordance with the Computer Security Act of 1987, the Government Information Security Reform Act of 2000, and OMB Circular A-130.

The primary objectives are:

- operate and maintain a secure IT infrastructure;
- secure the applications;
- protect the hosts and operating centers;
- protect the networks;
- ensure the privacy of data.

Campaign Goal 4: **Ensure the security, integrity, and availability of USACE information, systems, and infrastructure.**

Goal 4 Benefits: Provides reasonable assurance that unclassified and classified information is provided adequate protection and that data and software integrity are maintained. This also provides assurances that the availability of corporate resources, processing power, storage, and bandwidth are not seriously impacted by unplanned disruptions.

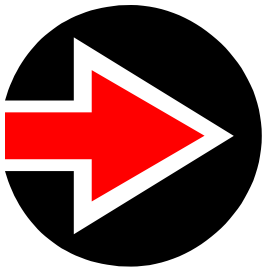
Campaign Strategy 4.1 Establish an Information Assurance Program that will provide the review, development, coordination and enforcement of IA policy, doctrine, directives, and regulations. Manage the acquisition, implementation, and

	integration of Information Assurance (IA) products and services into USACE programs and IT systems and activities.
Status/Notes	This is an ongoing effort.
Campaign Strategy 4.2	Provide Information Assurance technical support and products to USACE organizations.
Status/Notes	This support will initially be coordinated by the technical liaisons. The regional centers and districts are ultimately responsible for providing technical support and products.
Campaign Strategy 4.3	Provide Information Assurance education, training and awareness to USACE organizations.
Status/Notes	Coordinate with the DoD Information Assurance (IA) Education, Training, Awareness, and Products (IA ETA&P) Branch to provide products and curricula to support USACE professional and user certification programs, and disseminates IA products to meet government-wide IA training and awareness requirements.
Performance Measure 4.1:	Percent of decrease in security breaches after accreditation and certification.
Performance Measure 4.2:	Actions to mitigate vulnerabilities have been certified and implemented.
Performance Measure 4.3:	Percent reduction in user complaints regarding access to information.
Performance Measure 4.4:	Percentage of increase in user confidence levels as measured through a “confidence and availability survey”.

Responsibilities for Campaign Goal 4:

Enterprise Level:	Provide information assurance plans, policy and project management support to USACE programs, services and activities; provide information assurance technical support and products to USACE programs, services and activities; provide standards for information assurance education, training, and awareness products to USACE programs, services and activities.

Regional Level:	Coordinate the acquisition of information assurance capabilities with USACE services and agencies; coordinate the studies, analyses, and evaluations to focus acquisition strategies on IA products and services; provide support to certification activities required to meet specific program requirements; provide IA specific training; provide specific integrated IA solutions to support customer requirements.
District Level**:**	Implementation of specific security measures; ensure that all personnel have adequate awareness and training in IA measures.



Initiative 3

2.5 Initiative 3- Information Resources Management

This initiative directs the focus of staff and management on the optimized and effective management of information technology and knowledge capital. This initiative has four primary goals, each of which is detailed below with corresponding strategies:

1) The first goal of this initiative is to ensure the adoption and implementation of a structured and disciplined approach in the selection, control, and evaluation of IT investments. Investments on IT should be focused on a continuous increase in alignment with business plans, demonstrating a positive relationship between IT and accepted measures of business performance.

2) The second goal of this initiative is the facilitation of the sharing of knowledge across our traditional stovepipes. This knowledge often exists in small groups of people or stove-pipe systems around the agency. We need to better leverage that knowledge in order to help USACE do its mission better.

3) The third goal of this initiative is to ensure that USACE employees have the necessary levels of "personal knowledge capital." The successful development and deployment of IT strategies, in an era of rapid technological obsolescence and tight budgets, requires a cadre of highly skilled information resources management practitioners at all organizational levels. The Clinger-Cohen Act cites the need for action to provide the development of a well-trained corps of professional Federal government information resources managers. The Act explicitly levies responsibilities on CIOs regarding work force management.

4) The fourth goal of this initiative is to provide liaisons between the CIO and the functional community. This is critical in the successful dissemination of key IT knowledge. This knowledge, coming in the form of effective collaboration, ensures that USACE systems are built to be fully supportive and in alignment with the USACE mission. The results also include greater satisfaction within functional community for IT programs and services. This goal will achieve overall cost reductions through the avoidance of improper or misaligned information technologies.

Campaign Goal 5: **Provide a structured and disciplined approach in the selection, control, and evaluation of IT investments. Investments of IT should be focused on a continuous increase in alignment with business plans, affording positive relationship between IT and accepted measures of business performance.**

Goal 5 Benefits: A structured and disciplined approach to capital planning and investment will result in the mitigation of risks that are inherent to organizations with a complex portfolio of information systems. A standard set of evaluation criteria will increase the chances that IT investments are in alignment with organization mission objectives. This will also allow technology implementation managers to understand organization priorities and to plan technology strategies accordingly.

Campaign Strategy 5.1	Provide a corporate-wide integrated process for IT Investment Control and Evaluation
Status/Notes	A structured and disciplined approach to capital planning and investment is vital if USACE is to manage risks that are inherent to organizations with a complex portfolio of information systems. We must define and institute the Information Technology Portfolio Management Program to provide a structured capital planning and investment process for selecting, managing, and evaluating all major IT investments in information systems.
Campaign Strategy 5.2	Implement a standard process for IT project scoring and ranking criteria to determine which IT projects are best suited to meet USACE needs
Status/Notes	USACE must make technology decisions in a business context to ensure that they attain an acceptable ROI and that an IT project contributes directly to their missions. A standard set of evaluation criteria will not only help the corporation make the right decision, but will allow technology implementation managers to understand organization priorities and to plan technology strategies accordingly.
Campaign Strategy 5.3	Implement an automated system to assist in the selection, control and evaluation of IT investments.
Status/Notes	The Information Technology Investment Portfolio System (ITIPS) and the Corps Enterprise Architecture (CEA) each contain valuable pieces to the IT portfolio management

puzzle. A single set of requirements should be determined along with a subsequent tool alignment evaluation to determine the integration possibilities and common interface possibilities.

Performance Measure 5.1: Percent of technology portfolio initiatives that are in alignment with current mission objectives.

Performance Measure 5.2: Successful integration of the IT Investment process with the Enterprise Architecture process.

Performance Measure 5.3: Percent reduction in new requirements that are not aligned with current business objectives.

Responsibilities for Campaign Goal 5:

Enterprise Level: Provide oversight, policy, standards and guidance; establish the Information Technology Portfolio Management Program; ensure formal reviews of IT investments at the Corporate and MSC levels.

Regional Level: Oversight, implementation and management of Regional IT Capital investment process and review; formulate IT requirements based on the formal set of evaluation criteria.

District Level**:** Implementation of District IT Capital investment process and review; formulate it requirements based on the formal set of evaluation criteria.

Campaign Goal 6: Facilitate the sharing of knowledge across traditional stovepipes, both within USACE and with external parties. Exploit massive collections of detailed and historically rich data and turn them into timely, useful and shared business knowledge.

Goal 6 Benefits: USACE can improve its mission effectiveness through the better management and dissemination of its corporate knowledge. Knowledge sharing practices will lead to decreased costs, since techniques and knowledge can be reused. Knowledge sharing supports a team environment necessary for effective program/project management.

Campaign Strategy 6.1 Foster a culture that supports knowledge sharing through the development and implementation of a formal strategic knowledge-sharing program.

Status/Notes This is an ongoing effort in the form of the KM program.

Performance Measure 6.1:	Number of active communities of practice within USACE.
Performance Measure 6.2:	Establishment and governance structure for the Knowledge Management Program.
Performance Measure 6.3:	Perceived quality of information that is shared or transferred.

Responsibilities for Campaign Goal 6:

Enterprise Level:	Oversight, policy, standards and guidance management; support portal prototype project evolution; partnership with AIS Functional Points of Contact and the end user.
Regional Level:	Regional oversight, and implementation of knowledge portal; establish and participate in communities; incorporate their existing contents into the portal (i.e. web pages, etc.).
District Level**:**	Migrate to a knowledge portal incorporating their existing contents into the portal; establish and participate in communities.

Campaign Goal 7: Enable USACE employees to possess "personal knowledge capital" for successful development and deployment of IT. This requires a cadre of highly skilled information resources management practitioners at all organizational levels.

Goal 7 Benefits: A highly skilled workforce provides the knowledge and capabilities necessary to successfully implement our IT infrastructure. This is a critical component in enabling IT to effectively support USACE mission objectives. This trained workforce also provides USACE business leaders with an increased customer satisfaction level and a confidence that IT solutions are managed correctly and built according to appropriate standards. Retention of trained IT professionals ensures consistency of solutions over time. Ultimately, this minimizes turbulence within the workplace.

Campaign Strategy 7.1	Conduct an annual assessment to determine the established levels of appropriate knowledge and skill requirements to facilitate achievement of the IRM performance goals.
Status/Notes	The CIO must annually assess whether USACE has established appropriate knowledge and skill requirements to facilitate achievement of IRM performance goals. He or

	she must thereafter assess whether agency personnel meet those requirements. If requirements are not met, the CIO must develop strategies and specific plans for hiring, training, and professional development.
Campaign Strategy 7.2	Establish a program to ensure that USACE employees have access to IT training and IT resources as needed to perform their job functions and build their careers.
Status/Notes	This is an ongoing effort. This effort is aimed at ensuring that the USACE workforce is developing IT literacy and career development. The first priority of the CIO is to retain technical expertise within USACE. The CIO believes that investment in hiring, developing, and retaining talented technologist will enable USACE to continue to reap the benefits of technology innovation at a quicker rate. USACE employees are encouraged to attend CIO competency training through various sources including the National Defense University. USACE training program will prescribe action to train the current staff and recruit and educate additional personnel to meet IT skill shortfalls.
Performance Measure 7.1:	Percentage of training/retraining necessary to create the necessary skills portfolio within 5 years, actually accomplished within the measurement period.
Performance Measure 7.2:	Percentage of estimated yearly training/retaining budget dollars actually expended.
Performance Measure 7.3:	Percentage of users and IT staff trained in the use of new technology and techniques.
Performance Measure 7.4:	Percentage of staff professionally certified.

Responsibilities for Campaign Goal 7:

Enterprise Level:	Conduct annual assessment to determine skill deficiencies; establish and facilitate career management plans, recruit interns, provide adequate training on managing technology, CIO certification, etc., encourage and provide developmental assignments, provide incentives when appropriate, establish cross-training programs.

Regional Level:	Conduct annual assessment to determine skill deficiencies at the regional level; establish and facilitate regional career management plans, recruit interns, provide adequate training on managing technology, CIO certification, etc., encourage and provide developmental assignments, provide incentives when appropriate, establish cross-training programs.
District Level**:**	Conduct annual assessment to determine skill deficiencies at the district level; establish and facilitate district career management plans, recruit interns, provide adequate training on managing technology, CIO certification, etc., encourage and provide developmental assignments, provide incentives when appropriate, establish cross-training programs.

Campaign Goal 8: **Promote successful development, deployment, and operation of information technology through close coordination, liaison, and partnership between the business area program sponsor and the Chief Information Officer.**

Goal 8 Benefits: The concept of providing liaisons between the CIO and the functional community is critical in the successful dissemination of key IT knowledge. This knowledge, coming in the form of effective collaboration, ensures that USACE systems are built to be fully supportive and in alignment with the USACE mission. The results also include greater satisfaction within functional community for IT programs and services. This goal will achieve overall cost reductions through the avoidance of improper or misaligned information technologies.

Campaign Strategy 8.1	Implement the Functional Liaison Program.
Status/Notes	This is an ongoing effort. Teamwork is essential to delivering a quality system on time and within budget. Each business area Program Sponsor identifies and prioritizes “what needs to be done” in terms of business functions and performance goals. The Chief Information Officer or his or her liaison identifies how information technology can be applied to help the business area achieve results while maintaining efficient and effective information technology operations throughout USACE. In collaboration, the business area sponsor and the Chief Information Officer work closely to determine project cost

and schedule, provide resources, and prioritize information requirements.

Serve as shadow project managers to the Corps' Functional Proponents assisting them in maintaining compliance with CEA standards, policies and guidelines. Serve as Corporate Information (CI) Team Coordinators as part of the Enterprise Architecture Technical Assessment Teams (EATATs).

Performance Measure 8.1: Percentage of technology projects that utilize the Liaison Program.

Performance Measure 8.2: The number of liaisons participating on EATATs.

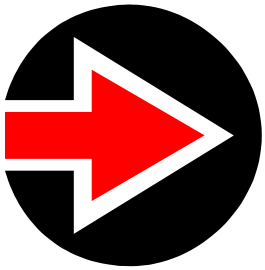
Performance Measure 8.3: Rating, through survey, of the satisfaction of the functional community with the liaison collaboration.

Responsibilities for Campaign Goal 8:

Enterprise Level: Overall establishment and direction for the liaison program; policies and management of the liaison program; key participants on various Enterprise Architecture Technical Assessment Teams.

Regional Level: Coordination with the liaison program; establishes the liaison needs at the regional level.

District Level**:** Coordination with the liaison program; establishes the liaison needs at the regional level.



Initiative 4

2.6 Initiative 4-USACE E-Government Programs/Systems

This initiative focuses on becoming a citizen-centered E-Government agency. Electronic government is one of the five key elements of the President's Management and Performance Plan. The President's Budget outlined how we will focus our E-Government initiatives on reforming the Government so that it is citizen-centered. Our key objective in this initiative is to seek opportunities to promote an electronic government to deliver services and meet customer's needs using electronic resources and modern technology.

Campaign Goal 9: **Identify and implement opportunities that use electronic means to provide information, services for USACE functionals and its clients.**

Goal 9 Benefits: The Internet has given USACE a chance to reinvent the way it does business. In general, the public sector can now provide real time data over the Web in much the same way commercial enterprises speed products to their customers using electronic delivery methods. The self-service model of E-Government will allow USACE to reduce costs, which is vital in this era of diminished operating budgets.

E-government will enable USACE to significantly improve our internal processes and efficiencies in our necessary interactions. For example, providing a single portal for all government services will allow USACE to break down the "stovepiping" nature of our public data stores, creating a more effective enterprise-wide model. Government employees can leverage the advantages of Web-enabled technology to conduct more efficient business processes, like enrolling in online health plans, accessing provider directories and conducting electronic expense reporting. More and more, government agencies are procuring the products and services they need in electronic e-commerce fashion over the Internet, saving both time and money.

Campaign Strategy 9.1 Create a task force with the responsibility to identify all means practical for implementing the President's E-Government initiative.

Status/Notes As identified by the Chief Information Officers Council, USACE will identify priority actions to achieve strategic improvements in the following four areas of service:

- Service to *individuals*: deploy easy to find on-stop shops for citizens, including single points of easy entry to access high quality government services;

- Service to *businesses*: reduce burden on business by using Internet protocols and consolidating the myriad of redundant reporting requirements;

- *Intergovernmental affairs*: make it easier for States to meet reporting requirements, while enabling better performance measurement and results, especially for grants:

- *Internal efficiency and effectiveness*: improve the performance and reduce costs of Federal government administration by using e-business best practices in areas such as supply chain management, financial management, and knowledge management.

Campaign Strategy 9.2	Conduct a survey to determine all USACE transactions with the public that are not being done electronically; conduct a survey of all other transactions not yet electronic, including information dissemination and transactions between agencies. Compile these lists in a standard database format for internal retrieval, reporting purposes, and performance accomplishment.
Status/Notes	Some USACE transactions of this type have already been documented in the Government Paperwork Elimination Act (GPEA) database available at http://cio.gov/Documents/gpea_database_information.html. There still needs to be a comprehensive survey conducted to ensure that a large representative number of both types of transactions have been captured.
Performance Measure 9.1:	Successful implementation of USACE one-stop-shop.
Performance Measure 9.2:	Percent reduction of overall reporting requirements (assumes level of redundancy elimination).
Performance Measure 9.3:	Percent reduction of USACE public transactions that are reported as not being electronic.
Performance Measure 9.4:	Percent reduction of all other USACE transactions that are reported as not being electronic.

Responsibilities for Campaign Goal 9:

Enterprise Level:	Develop and manage E-Government policy and standards; provide a one-stop-shop portal to all USACE business interaction requirements; through our liaisons, coordinate the research and review of citizen and business reporting requirements; provide a Corps-wide forum for collecting E-Government ideas and opportunities.
Regional Level:	Implement E-Government policy and standards; conduct research and review of reporting requirements of citizens and businesses and provide reporting consolidation; implement E-Government information portals.
District Level**:**	Implement district level E-Government policy and standards; conduct research and review of reporting requirements of citizens and businesses and provide reporting consolidation; implement E-Government information portals.

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APPENDIX A: USACE Common Operating Environment (COE) – Today, Interim, and Future

USACE COE Today

The Corps has two broad categories of automated systems: (1) scientific and engineering systems and (2) business systems. Generally, the scientific and engineering systems have kept pace with technology and are some of the most modern in the world. However, the business systems have suffered from wide-ranging design incompatibilities. They have been characterized by older technologies, use of older or outdated languages, late or no web enablement and duplicate systems containing much of the same data. Each functional manager, over the years, has developed his or her own systems, in some cases complete with hardware, software, and applications. In most cases, the hardware, application and data are tied together. When a change was made in the hardware, for example, the data and applications were both affected. When a data change was needed, there was no way to be sure that all the systems that used the same data had been changed. Furthermore, we had no clear picture of what data we had, how much it cost to maintain, who used it, etc.

With the Information Systems Modernization Program, mission-critical systems were brought into a form of standards compliance, using Oracle as a database and interface development language and operating on standardized hardware platforms. However, there continued to be a lack of cohesive standards applied to these modernization efforts, and the same problems related to systems interoperability, portability, and reusability persisted, and, in some cases, has grown worse.

The COE has not been formally adopted, defined, and implemented throughout the Corps. Currently, systems development practices within the Corps adhere only to a relatively small set of standards. While some of these standards will also be included in the proposed COE, they do not constitute a complete set themselves, and only partially represent the goals of the COE.

A large contributing factor for this situation is that the currently adopted technologies and standards have never been integrated under a cohesive umbrella. The typical systems developer was left to navigate this maze with little guidance. While the Corps has done a good job at seeking out best business practices and technologies in systems engineering, network capabilities, life cycle management and information management, there has not been a successful effort to establish these technologies and practices into a "plug and play" environment.

Representative examples of current programs, practices and technologies include the following (no implication of compliance noted, nor is this list comprehensive):

- Standardized use of Oracle for database applications
- A standard enterprise-wide network and backbone (CEEIS)
- Standardized computing platforms and operating systems
- Standardized use of IDEF modeling techniques for requirements engineering

- A standardized systems development life cycle (LCMIS)
- A standardized Command Data Model (CDM)
- Some standards for Web-based development
- A mixture of security protocols

USACE COE Interim Environment

The interim goal for the COE is to utilize to the extent possible the products and services identified in the Technical Reference Guide (TRG) to provide solutions for IT initiatives. The current list establishes the baseline COE. Once this current list has been scrubbed, a "preferred list" of products and services will be made available. These products and services will become the standards for the COE. All USACE Organizations will be required to develop plans for migrating to the preferred products and services list. Waivers will only be issued under compelling circumstances. USACE needs to determine:

- The long term benefits of migrating to COE,
- What systems and infrastructure should be converted to COE,
- The migration issues and strategies,
- The cost and complexity of the program.

The following steps are recommended:

1. Determine the appropriate scope for USACE to take on, i.e., narrow or all inclusive
2. Establish the appropriate level of compliance desired.
3. Determine current state of USACE compliance with COE pertaining to the selected scope.
4. Determine what must be accomplished to achieve desired level/scope
5. Evaluate benefits/costs
6. Review/revise scope and level selected in Steps 1 and 2.
7. Establish and implement a major CECI program to manage migration.

Pockets of COE compliance and excellence, and pockets of non-compliant systems will characterize the interim environment. This environment will have some systems that are fully interoperable, have lower program costs (development, deployment, maintenance, testing, and training), and are “plug-and-play” compatible with the technology infrastructure. There will still be many systems that have the same problems as we have today. A relatively large learning curve and training will also characterize this interim environment for current and new IT personnel.

USACE COE Future Environment

The future COE environment will be characterized by interoperable, cost-effective mission critical systems. USACE would realize a reduction in program costs and risks through frequent reuse of proven solutions and the sharing of common functionality, rather than developing systems from "scratch" every time. Systems built or modified that are in compliance with COE standards will have increased interoperability, reusability, and portability, with a reduction in development time, technical obsolescence, training requirements, and life-cycle cost. Improvement will result from utilizing a common infrastructure, common technology, widely accepted tools and methods, and the re-use of software objects and documentation.

Most likely, there will still be legacy systems that are not totally in compliance with the COE standards and are not easily adaptable to the COE technology environment. However, the Corps will find that the cost of bringing this set of systems into compliance is probably not easy to offset by business benefit. For this reason, these systems will remain in non-compliance until they are either replaced or archived.

Future of E-Government Environment

The next generation of online government will enable greater access to public sector services by combining voice, data and video into one platform. Often referred to as the "second wave" of E-Government, the convergence of various modes of communications will provide the citizen with a seamless method of getting virtually any government information they need through a single source.

In some government IT planning resources, the vision for E-Government in this next wave, is for constituents to be able to look up information online and receive additional help by simply clicking on a voice button tied to a government call center. At that point, a live government representative will be available to answer questions without the user having to leave their computer.

APPENDIX B: USACE IT Campaign Plan – Linkage Matrix

The tables on the pages that follow show the relationships between the goals and strategies of the USACE IT Campaign Plan and those of the overall USACE Campaign Plan for providing engineering services to the Nation. The matrix also shows the linkage between the CIO Competency Areas and the goals and strategies of this IT Campaign Plan.

APPENDIX B: USACE IT Campaign Plan – Linkage Matrix

USACE OVERALL CAMPAIGN PLAN	**PEOPLE** • Attract & retain world-class workforce • Create a learning organization • Develop leaders at all levels	**PROCESS** • Practice PM across all levels • One Corps, operating regionally & globally • Synergy between economic objectives & environmental values	**COMMUNICATIONS** • Develop key strategic messages fostering service to nation • Open work climate • Effective relationships w/ partners, customers & stakeholders • Strategic communications integrated into BP
CIO COMPETENCY AREAS	**IT CAMPAIGN PLAN**	**IT CAMPAIGN PLAN**	**IT CAMPAIGN PLAN**
Capital Planning & Investment Control	• Campaign Strategy 7.1 - Conduct an annual assessment to determine the established levels of appropriate knowledge and skill requirements to facilitate achievement of the IRM performance goals. • Campaign Strategy 7.2 - Establish a program to ensure that USACE employees have access to IT training and IT resources as needed to perform their job functions and build their careers.	• Campaign Strategy 5.1 - Provide a corporate-wide integrated processes for IT Investment Control and Evaluation • Campaign Strategy 5.2 - Implement a standard process for IT project scoring and ranking criteria to determine which IT projects are best suited to meet USACE needs • Campaign Strategy 5.3 - Implement an automated system to assist in the selection, control and evaluation of IT investments.	• The development of this Campaign Plan contains many strategic messages fostering service to the nation. • Campaign Strategy 8.1 – Implement the Functional Liaison Program • Campaign Strategy 9.1 – Create a task force with the responsibility to identify all means practical for implementing the President's E-Government Initiative • Campaign Strategy 9.2 - Conduct a survey to determine all USACE transactions with the public that are not being done electronically; conduct a survey of all other transactions not yet electronic, including information dissemination and transactions between agencies. Compile these lists in a standard database format for internal retrieval, reporting purposes, and performance accomplishment.

Performance & Results Based Management	• Campaign Strategy 7.1 - Conduct an annual assessment to determine the established levels of appropriate knowledge and skill requirements to facilitate achievement of the IRM performance goals. • Campaign Strategy 7.2 - Establish a program to ensure that USACE employees have access to IT training and IT resources as needed to perform their job functions and build their careers.	• Campaign Strategy 1.3 - Adopt an Architectural Alignment and Assessment Process to evaluate our current state of alignment with our near-term and future IT architecture and our current, near, and future business processes. Develop a plan for achieving alignment.	• Campaign Strategy 8.1 – Implement the Functional Liaison Program • Campaign Strategy 9.1 – Create a task force with the responsibility to identify all means practical for implementing the President's E-Government Initiative • Campaign Strategy 9.2 - Conduct a survey to determine all USACE transactions with the public that are not being done electronically; conduct a survey of all other transactions not yet electronic, including information dissemination and transactions between agencies. Compile these lists in a standard database format for internal retrieval, reporting purposes, and performance accomplishment.
Info Tech Architecture	• Campaign Strategy 1.4 - Implement an Enterprise Architecture Repository to assist IT professionals, managers, and functional liaisons with practical insights to IT processes, enterprise standards, architecture models, methodologies and strategies. • Campaign Strategy 7.1 - Conduct an annual assessment to determine the established levels of appropriate knowledge and skill requirements to facilitate achievement of the IRM performance goals. • Campaign Strategy 7.2 - Establish a program to ensure that USACE employees have	• Campaign Strategy 1.1 – Establish an IT Architecture Program and support the initial development of a USACE Enterprise Architecture Framework (p99) • Campaign Strategy 1.2 - Include architectural compliance as a key decision criterion in IT selection, control, and evaluation processes. • Campaign Strategy 1.3 - Adopt an Architectural Alignment and Assessment Process to evaluate our current state of alignment with our near-term and future IT architecture and our current, near, and future business processes. Develop a plan for achieving alignment. • Campaign Strategy 1.4 - Implement an Enterprise Architecture Repository to assist IT professionals, managers, and functional liaisons with practical insights to IT processes, enterprise standards, architecture models, methodologies and strategies.	• Campaign Strategy 1.5 - Conduct alignment synchronization with the Federal Enterprise Architecture Framework to ensure shared development for common Federal processes, interoperability, and sharing information among the Agencies of the Federal Government and other Governmental entities. • Campaign Strategy 8.1 – Implement the Functional Liaison Program

	access to IT training and IT resources as needed to perform their job functions and build their careers.	• Campaign Strategy 2.1 - Develop the USACE Common Operating Environment (COE). • Campaign Strategy 2.2 -Implement sound technology development and deployment infrastructure and the institutionalization of best software engineering and project management practices. • Campaign Strategy 3.1 - Implement modernized broadband technologies. • Campaign Strategy 3.2 - Implement an Enterprise Management System approach to our network and communications infrastructure. • Campaign Strategy 3.3 – Migrate to Windows 2000	
Work Process Improvements	• Campaign Strategy 7.1 - Conduct an annual assessment to determine the established levels of appropriate knowledge and skill requirements to facilitate achievement of the IRM performance goals. • Campaign Strategy 7.2 - Establish a program to ensure that USACE employees have access to IT training and IT resources as needed to perform their job functions and build their careers.	• Campaign Strategy 1.2 - Include architectural compliance as a key decision criterion in IT selection, control, and evaluation processes. • Campaign Strategy 2.2 -Implement sound technology development and deployment infrastructure and the institutionalization of best software engineering and project management practices. • Campaign Strategy 5.1 - Provide a corporate-wide integrated processes for IT Investment Control and Evaluation • Campaign Strategy 5.2 - Implement a standard process for IT project scoring and ranking criteria to determine which IT projects are best suited to meet USACE needs • Campaign Strategy 5.3 – Implement an automated system to assist in the selection, control, and evaluation of IT investments.	• Campaign Strategy 6.1 - Foster a culture that supports knowledge sharing through the development and implementation of a formal strategic knowledge-sharing program. • Campaign Strategy 8.1 – Implement the Functional Liaison Program

Security & Privacy of Info Systems	• Campaign Strategy 4.3 - Provide Information Assurance education, training and awareness to USACE organizations. • Campaign Strategy 7.1 - Conduct an annual assessment to determine the established levels of appropriate knowledge and skill requirements to facilitate achievement of the IRM performance goals. • Campaign Strategy 7.2 - Establish a program to ensure that USACE employees have access to IT training and IT resources as needed to perform their job functions and build their careers.	• Campaign Strategy 4.1 - Establish an Information Assurance Program that will provide the review, development, coordination and enforcement of IA policy, doctrine, directives, and regulations. Manage the acquisition, implementation, and integration of Information Assurance (IA) products and services into USACE programs and IT systems and activities.	• Campaign Strategy 4.2 - Provide Information Assurance technical support and products to USACE organizations. • Campaign Strategy 8.1 – Implement the Functional Liaison Program
Info Tech Acquisition	• Campaign Strategy 7.1 - Conduct an annual assessment to determine the established levels of appropriate knowledge and skill requirements to facilitate achievement of the IRM performance goals. • Campaign Strategy 7.2 - Establish a program to ensure that USACE employees have access to IT training and IT resources as needed to perform their job functions and build their careers.	• Campaign Strategy 1.2 - Include architectural compliance as a key decision criterion in IT selection, control, and evaluation processes. • Campaign Strategy 4.1 - Establish an Information Assurance Program that will provide the review, development, coordination and enforcement of IA policy, doctrine, directives, and regulations. Manage the acquisition, implementation, and integration of Information Assurance (IA) products and services into USACE programs and IT systems and activities.	• Campaign Strategy 8.1 – Implement the Functional Liaison Program
Personnel Knowledge &	• Campaign Strategy 7.1 -	• Campaign Strategy 1.4 - Implement an	• Campaign Strategy 6.1 - Foster a culture

Skills Proficiency	Conduct an annual assessment to determine the established levels of appropriate knowledge and skill requirements to facilitate achievement of the IRM performance goals. • Campaign Strategy 7.2 - Establish a program to ensure that USACE employees have access to IT training and IT resources as needed to perform their job functions and build their careers.	Enterprise Architecture Repository to assist IT professionals, managers, and functional liaisons with practical insights to IT processes, enterprise standards, architecture models, methodologies and strategies.	that supports knowledge sharing through the development and implementation of a formal strategic knowledge-sharing program.